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17. The gas turbine engine as recited in claim 15, wherein the fan drive turbine has a first exit area and rotates at a first speed, the second turbine section has a second exit area and rotates at a second speed, which is faster than the first speed, the first and second speeds being redline speeds, a first performance quantity is defined as the product of the first speed squared and the first area, a second performance quantity is defined as the product of the second speed squared and the second area, and a performance ratio of the first performance quantity to the second performance quantity is greater than or equal to about 0.8 and less than or equal to 1.5.

18. The gas turbine engine as recited in claim 17, wherein said number of fan blades is less than 18 and the second turbine has two stages.

19. The gas turbine engine as recited in claim 18, wherein the performance ratio is above or equal to about 1.0.

20. The gas turbine engine as recited in claim 19, further comprising a frame structure positioned between the fan drive turbine and the second turbine, and a plurality of vanes associated with the frame structure, and a flow path through said frame structure being part of the volume of the turbine section.

21. The gas turbine engine as recited in claim 17, wherein the power density is greater than or equal to 3.0 lbf/in³.

22. The gas turbine engine as recited in claim 17, wherein a fan drive shaft connects said fan drive turbine to said gear reduction and said second turbine driving a compressor in said compressor section through a second shaft, a first forward bearing supporting said fan drive shaft and a second forward bearing supporting said second shaft, and a first aft bearing supporting said fan drive shaft at a location aft of a connection point between said fan drive turbine rotor and said fan drive shaft, and a second aft bearing supporting an aft portion of said second shaft on said fan drive shaft.

23. The gas turbine engine as recited in claim 15, further comprising a frame structure positioned between the fan drive turbine and the second turbine, and a plurality of vanes associated with the frame structure, and a flow path through said frame structure being part of the volume of the turbine section.

24. A gas turbine engine comprising:

a fan including a plurality of fan blades rotatable about an axis, wherein the plurality of fan blades is less than 18 fan blades;

a compressor section;

a combustor in fluid communication with the compressor section;

a turbine section in fluid communication with the combustor, the turbine section including a fan drive turbine and a second turbine, wherein the second turbine is a two stage turbine and is disposed forward of the fan drive turbine, and the fan drive turbine includes a plurality of turbine rotors with a ratio between a

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number of fan blades and a number of fan drive turbine rotors is between 2.5 and 8.5;

a low speed spool associated with the fan drive turbine and including an inner shaft, and a high speed spool associated with the second turbine and including an outer shaft, the inner shaft and outer shaft being concentric;

a planetary gearbox having a sun gear, a plurality of planet gears configured to rotate and spaced apart by a carrier configured to rotate in a direction common to the sun gear, a non-rotating ring gear, the gearbox configured to be driven by the fan drive turbine to rotate the fan about the axis; and

a power density at Sea Level Takeoff greater than or equal to 1.5 and less than or equal to 5.5 lbf/in³ and defined as thrust in lbf and a volume of the turbine section in inch³ and defined as thrust in lbf divided by a volume of the turbine section in inch³ measured between an inlet of a first turbine vane in said second turbine to an exit of a last rotating airfoil stage in said fan drive turbine.

25. The gas turbine engine as recited in claim 24, wherein the fan drive turbine has a first exit area and rotates at a first speed, the second turbine section has a second exit area and rotates at a second speed, which is faster than the first speed, the first and second speeds being redline speeds, a first performance quantity is defined as the product of the first speed squared and the first area, a second performance quantity is defined as the product of the second speed squared and the second area, and a performance ratio of the first performance quantity to the second performance quantity is greater than or equal to 0.8 and less than or equal to 1.5.

26. The gas turbine engine as recited in claim 25, wherein the power density is greater than or equal to 3.0 lbf/in³.

27. The gas turbine engine as recited in claim 25, there being a first forward bearing supporting said inner shaft and a second forward bearing supporting said outer shaft and a first aft bearing supporting said inner shaft forward of a connection of said fan drive turbine rotors to said inner shaft and a second aft bearing aft of a connection between rotors of said second turbine and said outer shaft.

28. The gas turbine engine as recited in claim 27, wherein the power density is greater than or equal to 3.0 lbf/in³.

29. The gas turbine engine as recited in claim 25, further comprising a frame structure positioned between the fan drive turbine and the second turbine, and a plurality of vanes associated with the frame structure, and a flow path through said frame structure being part of the volume of the turbine section.

30. The gas turbine engine as recited in claim 29, wherein the power density is greater than or equal to 3.0 lbf/in³.

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